

CLAIMS

What is claimed is:

1. A display apparatus for use with a host computer system, the display apparatus
5 comprising circuitry allowing an interlaced mode of operation and a noninterlaced
mode of operation, the display apparatus comprising:
a screen, said screen operable to display visually detectable output from the
host computer system when operating in the noninterlaced mode of operation and
operable to display a television compatible signal when operating in the interlaced
10 mode of operation;
a communication channel between said host computer system and said display
apparatus, the communication channel for transmitting commands from said host
computer system to said display apparatus; and
a microprocessor for receiving commands from said host computer system,
15 said microprocessor comprising control logic for switching said display apparatus
between said interlaced and noninterlaced modes of operation in response to said
commands and enabling an overlay window.
2. A display apparatus of claim 1, wherein said interlaced mode of operation
supports at least one of a National Television System Committee (NTSC) input, a
20 Phase Alteration by Line (PAL) input, and a Sequential a Memoire (SECAM) input.
3. A display apparatus of claim 1, wherein said noninterlaced mode of operation
supports at least one of a computer graphics mode input, VGA input and SVGA input.
4. A display apparatus of claim 1, wherein the microprocessor receives at least
one command from said host computer system, the command suitable for controlling
25 a television function of the display apparatus from the host computer system, wherein
the television function includes at least one of changing a channel, volume adjustment
and picture adjustment.

5. A display apparatus of claim 1, wherein the microprocessor receives at least one command from said host computer system, the command suitable for controlling a television function of the display apparatus from the host computer system, wherein
5 the television function includes at least one of selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution and color temperatures.
6. A display apparatus of claim 5, wherein the television function of the display
10 apparatus is controlled from the host computer system while the display apparatus is in an interlaced mode of operation.
7. A display apparatus of claim 1, wherein said display apparatus is switched to said interlaced mode of operation, a video signal from a video controller in
15 noninterlaced mode is not displayed by said display apparatus.
8. A display apparatus of claim 1, wherein said interlaced mode of operation supports Sequential a Memoire (SECAM) input.
- 20 9. A display apparatus of claim 1, wherein the command is a display mode change command.
10. A display apparatus of claim 9, wherein the command is sent over a serial
25 port.
11. A display apparatus of claim 9, wherein the command is sent over a parallel port.
12. A display apparatus of claim 1, wherein the overlay widow is enabled as at
30 least one of a picture-in-picture (PIP) and a picture-on-picture (POP).

13. A computer system comprising:
a host computer system including:
a processor;
a memory coupled to said processor;
5 a video controller coupled to said processor and said memory; and
a display apparatus coupled to a video controller of the host computer system,
the display apparatus comprising circuitry allowing an interlaced mode of operation
and a noninterlaced mode of operation, the display apparatus comprising:
a screen, said screen operable to display visually detectable output from the
10 host computer system when operating in the noninterlaced mode of operation and
operable to display a television compatible signal when operating in the interlaced
mode of operation;
a communication channel between said host computer system and said display
apparatus, the communication channel for transmitting commands from said host
15 computer system to said display apparatus; and
a microprocessor for receiving commands from said host computer system,
said microprocessor comprising control logic for switching said display apparatus
between said interlaced and noninterlaced modes of operation in response to said
commands and enabling an overlay window.
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14. A computer system of claim 13, wherein said noninterlaced mode of operation
supports at least one of computer graphics mode input, VGA input and SVGA input.
15. A computer system of claim 13, wherein the microprocessor receives at least
25 one command from said host computer system, the command suitable for controlling
a television function of the display apparatus from the host computer system, wherein
the television function includes at least one of changing a channel, volume adjustment
and picture adjustment.
- 30 16. A computer system of claim 13, wherein the microprocessor receives at least
one command from said host computer system, the command suitable for controlling

a television function of the display apparatus from the host computer system, wherein the television function includes at least one of selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution and color temperatures.

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17. A computer system of claim 16, wherein the television function of the display apparatus is controlled from the host computer system while the display apparatus is in an interlaced mode of operation.

10 18. A computer system of claim 13, wherein said display apparatus is switched to said interlaced mode of operation, a video signal from a video controller in noninterlaced mode is not displayed by said display apparatus.

19. A computer system of claim 13, wherein the video controller receives a signal from the display apparatus.

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20. A computer system of claim 19, wherein the signal from the display apparatus is a video signal.

20 21. A computer system of claim 20, wherein the video signal is a composite signal.

22. A computer system of claim 20, wherein the video signal is an S-video signal.

25 23. A computer system of claim 13, wherein said interlaced mode of operation supports at least one of a National Television System Committee (NTSC) input, a Phase Alteration by Line (PAL) input, and a Sequential a Memoire (SECAM) input.

24. A computer system of claim 13, wherein the command is a display mode change command.

25. A computer system of claim 24, wherein the command is sent over a serial port.
- 5 26. A computer system of claim 24, wherein the command is sent over a parallel port.
27. A computer system of claim 24, wherein the command is sent over a data port.
- 10 28. A computer system of claim 13, wherein the overlay widow is enabled as at least one of a picture-in-picture (PIP) and a picture-on-picture (POP).

29. A method of operating a computer system to control a display apparatus, the display apparatus coupled to a video controller of the computer system, said computer system and said display apparatus further coupled via a communication channel, the display apparatus comprising circuitry providing a first mode of operation and a second mode of operation, said first mode of operation being one of an interlaced mode of operation and a noninterlaced mode of operation and the second mode of operation being the other, said method comprising the steps of:

operating the display in said first display mode;

receiving user input to change the display mode from said first mode of operation to said second mode of operation;

sending a mode change command to the display apparatus in response to said user input;

transitioning the display apparatus from said first mode of operation to said second mode of operation; and

controlling at least one television function of the display apparatus from the host computer system by a command received from said host computer system when said display device is in said interlaced mode of operation and enabling an overlay window,

wherein the television function includes at least one of changing a channel, volume adjustment, picture adjustment, selecting a video source, brightness, contrast, vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate, resolution and color temperatures.

30. A method of claim 29, wherein said interlaced mode of operation supports at least one of a National Television System Committee (NTSC) input, a Phase Alteration by Line (PAL) input, and a Sequential a Memoire (SECAM) input.

31. A method of claim 30, wherein said display apparatus is transitioned to said second mode of operation from said first mode of operation, a video signal from a video controller in said first mode is not displayed by said display apparatus.

32. A method of claim 30, wherein the mode change command is sent from the computer system via the communication channel.

33. A method of claim 29, wherein the overlay widow is enabled as at least one of
5 a picture-in-picture (PIP) and a picture-on-picture (POP).

34. A computer system comprising:
a host computer system including:
a processor;
a memory coupled to said processor;
- 5 a video controller coupled to said processor and said memory; and
- a display apparatus coupled to a video controller of the host computer system,
the display apparatus comprising:
- a screen, said screen operable to display visually detectable output from the
host computer system when operating in the noninterlaced mode of operation and
10 operable to display a television compatible signal when operating in the interlaced
mode of operation;
- a communication channel between said host computer system and said display
apparatus, the communication channel for transmitting commands from said host
computer system to said display apparatus; and
- 15 a microprocessor for receiving commands from said host computer system,
said microprocessor comprising control logic for controlling a television feature of the
display apparatus from the host computer system when said screen is operating in said
interlaced format and enabling an overlay window,
- 20 wherein the television feature includes at least one of changing a channel,
volume adjustment, picture adjustment, selecting a video source, brightness, contrast,
vertical and horizontal sizing and positioning, on/off (rest/resume), refresh rate,
resolution and color temperatures.
- 25 35. A computer system of claim 34, wherein said interlaced mode of operation
supports at least one of a National Television System Committee (NTSC) input, a
Phase Alteration by Line (PAL) input, and a Sequential a Memoire (SECAM) input.

36. A computer system of claim 34, wherein the microprocessor is suitable for switching said display apparatus between said interlaced and noninterlaced modes of operation.

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37. A computer system of claim 34, wherein the overlay widow is enabled as at least one of a picture-in-picture (PIP) and a picture-on-picture (POP).